

## Research Article

# Implementation of Discourse Network Analysis Related to News regarding PT Pertamina's Consumer Needs, Satisfaction, and Engagement

Adji Achmad Rinaldo Fernandes , Solimun Solimun , and Lailil Muffikhah 

University of Brawijaya, Malang, Indonesia

Correspondence should be addressed to Adji Achmad Rinaldo Fernandes; [fernandes@staff.ub.ac.id](mailto:fernandes@staff.ub.ac.id)

Received 5 October 2021; Revised 17 January 2022; Accepted 24 February 2022; Published 22 March 2022

Academic Editor: Chin-Chia Wu

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The purpose of this study is to implement Discourse Network Analysis (DNA) and analyze the results in the formation of networks related to issues and actors in a news regarding consumer needs, satisfaction, and attachment to PT Pertamina. This study is the qualitative method that applies a qualitative Discourse Network Analysis (DNA) approach. Sources of DNA data come from various information in cyberspace (mass media, journals, articles, etc.) that are by the research context. Based on the search results in cyberspace, we obtained about 68 relevant news sources discussing consumer service on BBM products PT. Results of DNA taken from 68 news stories in cyberspace show that there are 45 actors from 14 different organizations who have opinions about PT Pertamina's consumers. Two actors only have a negative opinion, two actors have positive and negative opinions, and 41 actors have a positive opinion about the main issue of consumer needs. And we obtained 74 issues from the news obtained grouped into 3 main issues, namely, consumer needs, consumer satisfaction, and consumer engagement. And from 45 actors obtained from online news sources, they are grouped into 11 actor themes. Based on DNA results, it can be seen that there are several variables that have a possible influence on customer service. Variables that are likely to affect customer service include consumer needs, consumer satisfaction, and consumer engagement. The originality of this research lies in the application of DNA regarding consumer needs, satisfaction, and attachment to PT Pertamina.

## 1. Introduction

Pertamina is the largest state-owned company (BUMN) in Indonesia in terms of revenue and profit. The company is active in the upstream and downstream sectors of the oil and gas industry. The upstream sector includes exploration and production of oil, gas, and geothermal energy, while downstream activities include processing, marketing, trading, and shipping. No wonder that the marketing of Pertamina's company products reaches all parts of Indonesia. Therefore, Pertamina's consumers are none other than almost all Indonesian people. PT Pertamina needs to maintain satisfaction and meet the needs of consumers.

Satisfaction is the customer's response to the fulfillment of his needs. This means the assessment that a form of the privilege of an item or service or the goods/services itself

provides a level of comfort associated with the fulfillment of a need, including meeting needs below expectations or meeting needs exceeding customer expectations [1]. This shows that the fulfillment of a need creates comfort and comfort is satisfaction. Unfortunately, the meaning of fulfillment is no longer as clear as the meaning of satisfaction. What satisfies one customer may not satisfy another. What satisfies a customer in one situation may not satisfy the same customer in another.

To satisfy customers, companies need to understand what is important to them and try to at least meet their basic expectations. Customer needs are not only about the goods and services themselves. Many factors affect customer satisfaction. A company can produce customer satisfaction by meeting customer expectations and needs more than expected. When customers interact with business people, they

have expectations about some aspect of the interaction as well as about what is being transacted.

Satisfying customers so they do not want to go elsewhere is a successful strategy for making a company different from the rest. To keep customers coming back for more, companies must give them a reason to come back. One way to set a company apart from its competitors is through value creation. Value is created not merely by lowering the price of the goods or services offered but is created at a higher level in terms of customer service which makes customers feel different when they are treated with respect and they can enjoy a relationship with the staff of the company concerned. Various satisfactions, needs, and consumer attachment to a company can be seen in the news in the mass media.

DNA is a methodological approach that combines discourse analysis and social network analysis to identify a discourse in various documents to form a network [2]. In this study, the DNA method will be applied to news related to consumer needs, satisfaction, and attachment to PT Pertamina, so that it can be known which actors are involved, the relationship between actors and issues, actors with actors, between issues, and others from statements related to needs, satisfaction, and consumer attachment to PT Pertamina.

## 2. Literature Review

*2.1. Performance.* According to [3], the term performance comes from the word job performance or actual performance which means achievement at work or the actual achievement achieved by someone. The definition of performance (work achievement) is the quality and quantity of work achieved by an employee in carrying out his duties following the responsibilities given to him, while according to [4] the notion of performance is a result achieved by a person in carrying out his assigned tasks imposed on him based on skills, experience, sincerity, and time.

Performance is defined as the result of work that is achieved in quality and quantity by an employee in carrying out his duties following the responsibilities given to him [3]. Performance is a real behavior that is displayed by everyone as work performance is produced by employees according to their role in the company [5]. The effect of environmental uncertainty (classified as tightly regulated) on firm performance is largely determined by the direction of its strategic orientation and level of innovation [6]. Thus, performance is the result of the capabilities achieved by personnel following their role in the organization.

*2.2. Consumer Preference.* Consumer preferences contain the notion of a tendency to choose or prioritize the desired. Preference is a liking (tendency) to something. According to [7], preference is defined as a person's choice of likes or dislikes for a product, goods, or service that is consumed. Paper [8] defines preference as a tendency to pay attention to people and act towards people. The activity or situation that is the object of interest is accompanied by feelings of pleasure or satisfaction. Meanwhile, according to [9], the

definition of preference is a mental device consisting of a mixture of feelings, expectations, beliefs, and prejudices. A rational person will choose the most preferred item. In other words, from several alternatives, people are more likely to choose something that can maximize their satisfaction. This is in line with the concept of "goods that are more desirable provide greater satisfaction than goods that are less desirable" [10]; preference is defined as an evaluation determination of various objects (two or more objects). Comparing two different objects is something that is always involved in preference. Sometimes attitudes become a foundation for preferences, and preferences sometimes become the basis for comparisons between attributes or features of two or more products. The preference in the source of corporate financing is identical to the Pecking Order Theory. The importance of consumer preferences has not received sufficient attention in breeding programs, which to date have not been well equipped to address these preferences [11]. According to [12], the theory of capital structure was started by Duran in 1952, then Modigliani and Miller (1958) [13] issued the MM theory, and it is considered the beginning of the theory of capital structure. Furthermore, [14] put forward the Packing Order Theory which discusses the order of financing changes.

*2.3. Consumer Satisfaction.* Paper [15] defines customer satisfaction as a person's feeling of liking or disliking a product after comparing the performance of the product with what is expected. Meanwhile, [16] stated that consumer satisfaction is the result of a thorough evaluation of consumers on the performance of the products they consume. One of the company's goals is to provide satisfaction to its customers, which must be balanced with the effective use of resources by the company to produce goods and services that customers want, so that the risk of market failure can be overcome [17]. Paper [18] identified two different consumer satisfaction concepts, namely, transaction-specific satisfaction and overall satisfaction. Transaction-specific satisfaction is a concept that refers to the assessment of consumer satisfaction after purchasing a particular product or brand, while overall satisfaction is a concept that measures consumer satisfaction (dissatisfaction) with a particular product or brand as a whole based on all his experiences in consuming the product or brand. Thus, overall satisfaction can be viewed as a function of all previous transaction-specific satisfaction. In this study, the concept of customer satisfaction used is overall customer satisfaction.

In the last few decades, customer satisfaction has always been the focus of attention of academics and marketing practitioners. This concern stems from a philosophy that states that achieving a company's success depends on the company's ability to deliver what its customers want. In other words, customer satisfaction is the key to the company's success [19]. Furthermore, [20] explained that customer satisfaction creates consumer retention which can further increase company profits, considering that the cost of retaining existing customers is cheaper than the cost of finding new customers.

**2.4. Consumer Trust.** Paper [21] defines trust as a willingness to depend on others who have been trusted. Trust contains two different aspects, namely, credibility, which refers to the belief that the other party has expertise in carrying out their duties, and benevolence which refers to the sincerity of the other party that he has the sincerity to carry out what has been agreed on [22]. This definition indicates that trust is a fundamental component of a marketing strategy in creating genuine relationships with consumers. Companies operating in the industrial market build cooperative relationships with their customers as one of the competitive strategies. With a long-term cooperative relationship, companies can work more effectively by saving transaction costs and increasing competitiveness. Such cooperative relationships are usually characterized by high trust [23]. Trust is an important concept in business relationships. Classification of belief research with three main theoretical perspectives: the views of social psychologists, the views of personality theorists, and the views of sociologists and economists [24].

Similar conditions also occur in the consumer market where the level of competition between companies is very high. Following the strategy adopted by industrial companies, consumer goods companies seek to build relationships with their consumers [25]. This is done by building consumer confidence in the company's product brands. Paper [26] shows that when consumers believe that a particular brand can provide what they expect this will lead to loyalty to the brand. This finding is supported by [27, 28] which proves the influence of consumer trust on loyalty positively and significantly.

**2.5. Emotional Attachment.** Attachments is an emotional condition in a special relationship between a person and a particular object [29]. The attachment has varying degrees, where a high attachment is associated with strong feelings of connection (connection), affection (affection), love (love), and passion (passion) [30]. The desire to have an emotional attachment to an object is a basic human need [29, 31], which begins when infants are attached to their mothers [29] and continues through adulthood emotionally to their partner [32] and their best friend [33]. Previous research generally views emotional attachment as a basic human need that occurs naturally and is unconscious [31]. Emotional attachments can occur between human and nonhuman objects including sports teams, products, and even work projects [34].

**2.6. Product Involvement.** Involvement is based on needs, values, and interests that motivate consumers to an object [35]. Furthermore, [35] states that involvement depends on the level of importance and personal relevance of consumers to an object, and in this study, the object is a product. Another definition is offered by [36] which states that involvement is a mental readiness of consumers to think to make decisions and their actions related to a product. This study adopts both definitions that have been accepted by the public and defines involvement as the level of importance and personal relevance of consumers in a product that

involves thinking to make decisions and actions. Consumer involvement with the product takes a short or long time. This issue is in the spotlight because of the differences in consumer characteristics in solving the problem [37].

**2.7. Customer Needs.** Customer needs and customer satisfaction can be considered as something that is at the center of every successful business [38]. To satisfy our customers, we need to understand what is important to them and try to at least meet their basic expectations. Customer needs are not only about the goods and services themselves. Many factors affect customer satisfaction. The food in a restaurant may be delicious, but overall the service is so unpleasant that customers are reluctant to come back. It is important for market participants and those responsible for customer service to have a solid appreciation of customer needs and expectations. A company can produce customer satisfaction by meeting customer expectations and needs more than expected. When customers interact with business people, they have expectations about some aspect of the interaction as well as about what is transacted. It may be useful to take a moment to just think about what is being transacted when a customer is dealing with a business person. When customers buy a product or service, they sacrifice several things. The most obvious is the money they spend, but there are many others too. It is also worth considering the time and energy they spend shopping, comparing items, and deciding to buy.

**2.8. Big Data Analysis.** The term big data is always closely related to very large amounts of data and goes through complex stages when the data is stored, processed, and analyzed in traditional database technologies. In a more complex discussion, big data is influenced by size/amount (volume), diversity (variety), and velocity (velocity). Lately, there has been a problem with how to get valid data. Of the many data obtained from various sources, it is very possible that if the data has various meanings (ambiguous), there are even indications that the data has ambiguity, for example, a sentence with the same meaning but different. The solution to this problem is to test the quality of the data so that the term veracity arises because there is uncertainty in the data and the last is value, namely, aspects related to information extraction. The five are known as "the 5V's of big data analytics."

**2.9. Discourse Network Analysis (DNA) and Software.** Discourse Network Analysis is a category-based combination of content analysis and social network analysis. Next we will show how relational information embedded in PCA data can be analyzed in a Discourse Network Analysis framework. As for the unit of measurement, Discourse Network Analysis takes a similar approach to the politics of claims analysis: actor statements are the primary concern of data coding. The latter occurs within text data instead of using a separate spreadsheet. It helps to review the statement and its context later and to do multipass coding. The discourse network model has been implemented in a free-to-use

software called Discourse Network Analyzer (DNA). It serves two purposes: assigning actor and category tags to text data. According to [2], DNA is a methodological approach that combines discourse analysis and social network analysis to identify a discourse in various documents to form a network. Paper [39] mentioned that DNA combines qualitative-based content analysis, namely, discourse analysis, with social network analysis to find out the ideas of actors relationally and systematically.

The coding scheme can be adapted to the problem or theory at hand. For example, a narrative policy framework [40] requires coding other variables such as villains and heroes, and analysis of political claims [41] requires variables such as recipient, tone, and location. In the case of these or other frameworks, the descriptive network model in Figure 1 can be adapted.

### 3. Methods

In the qualitative method, this study applies a qualitative Discourse Network Analysis (DNA) approach. Sources of DNA data come from various information in cyberspace (mass media, journals, articles, etc.) that are following the research context. Based on the search results in cyberspace, we obtained about 68 relevant news sources discussing consumer service on PT Pertamina's BBM products related to this research. The content is then used for DNA by processing it on the Discourse Network Analyzer software. In DNA data processing, statements, actors, concepts/issues, and sentiments, along with the origin of the organization, will be generated.

### 4. Results and Discussion

Based on the results of the Discourse Network Analysis (DNA), two things were obtained, namely, issues and actors related to PT Pertamina's services to its consumers. Figure 2 is a network display of DNA results analyzed using the Discourse Network Analyzer software and visualization using the Visone software. The DNA, in this case, was taken from 68 news stories in cyberspace that discussed consumer services provided by PT Pertamina. The news obtained can be translated into 74 news issues. Similar issues are further grouped into main issues. These actors and issues were analyzed by DNA. In Figure 3, there is also a black circle icon that shows actors in service segmentation consumer PT Pertamina and a black square icon that shows issues in the segmentation of PT Pertamina's customer service. The green line shows the positive sentiment narrative, and the red line shows the negative sentiment narrative, while the blue line shows several statements that contain positive and negative sentiment narratives.

The results of DNA show that there are 45 actors from 14 organizations who differ in their opinions regarding the segmentation of PT Pertamina's customer service, classified into three main concepts or issues. The mapping image can provide information that several actors speak or express their opinions to the public regarding three main issues of PT Pertamina's customer service, namely, consumer

satisfaction, consumer engagement, and consumer needs. Some actors only have a negative opinion about consumer needs. The actor is the Executive Director of Energy Watch. According to him, consumer needs for motorized vehicles and fuel must be balanced with appropriate government policies in terms of how easy it is for people to own motorized vehicles. Meanwhile, the views of the community who act as consumers who assess the satisfaction, attachment, and needs of PT Pertamina are positive or it can be interpreted that PT Pertamina has been providing good service to consumers as shown in Figure 4.

Based on Table 1, the issues and actors involved in PT Pertamina's customer service segmentation can be obtained as described in the following subchapter.

*4.1. Issue.* Based on news searches on the topic of PT Pertamina's customer service, according to this study, several issues/concepts were obtained that could be explored further as consideration for displaying complete data. These issues can be further classified into main issues, as in Table 2.

Based on Table 2, it can be seen that there are similarities in 74 issues obtained from online news sources. Thus, the 74 issues are then grouped into 3 main issues (issue groups).

*4.2. Actor.* Based on the search for topics in cyberspace regarding the segmentation of PT Pertamina's customer service, it was found that several stakeholders were involved and give their opinion about PT Pertamina's customer service segmentation. These stakeholders are then grouped into several actor themes. Stakeholders and actor themes are presented in Table 3. This is interesting to explore further to display more complete data.

Based on Table 3, it can be seen that there are similarities in 45 actors obtained from online news sources. Thus, the 45 actors were grouped into 11 actor themes.

Based on Table 2, with DNA and analysis of 3 main issues, the main issues relevant to Pertamina's customer service segmentation can be divided into several concepts. The mapping of the main issues into issue concepts can be seen in Table 2.

Table 2 shows that 10 issue concepts can then be compiled into minor propositions. In this regard, the following proposition can be formulated:

- (1) Pertamina's commitment can meet consumer needs
- (2) Pertamina's commitment can fulfill customer satisfaction
- (3) Availability of facilities can meet consumer needs
- (4) Availability of facilities can meet customer satisfaction
- (5) Availability of facilities can meet consumer engagement
- (6) Digitization can meet consumer satisfaction
- (7) Digitization can fulfill consumer engagement
- (8) Promotion can meet customer satisfaction

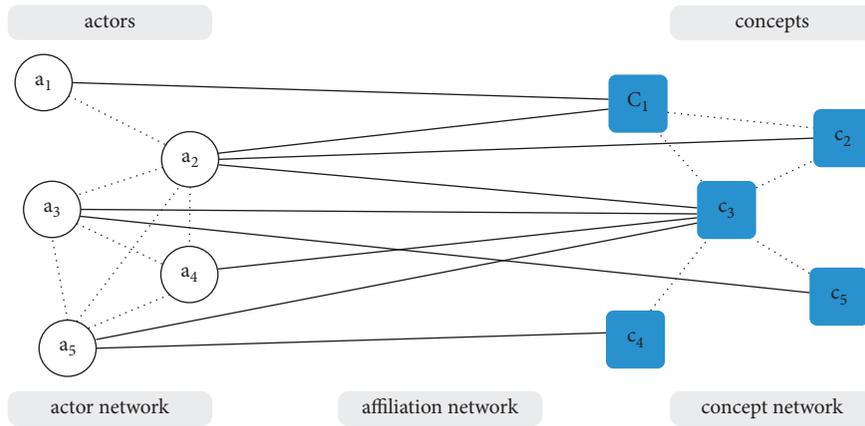


FIGURE 1: Illustration of the basic model of discourse network.

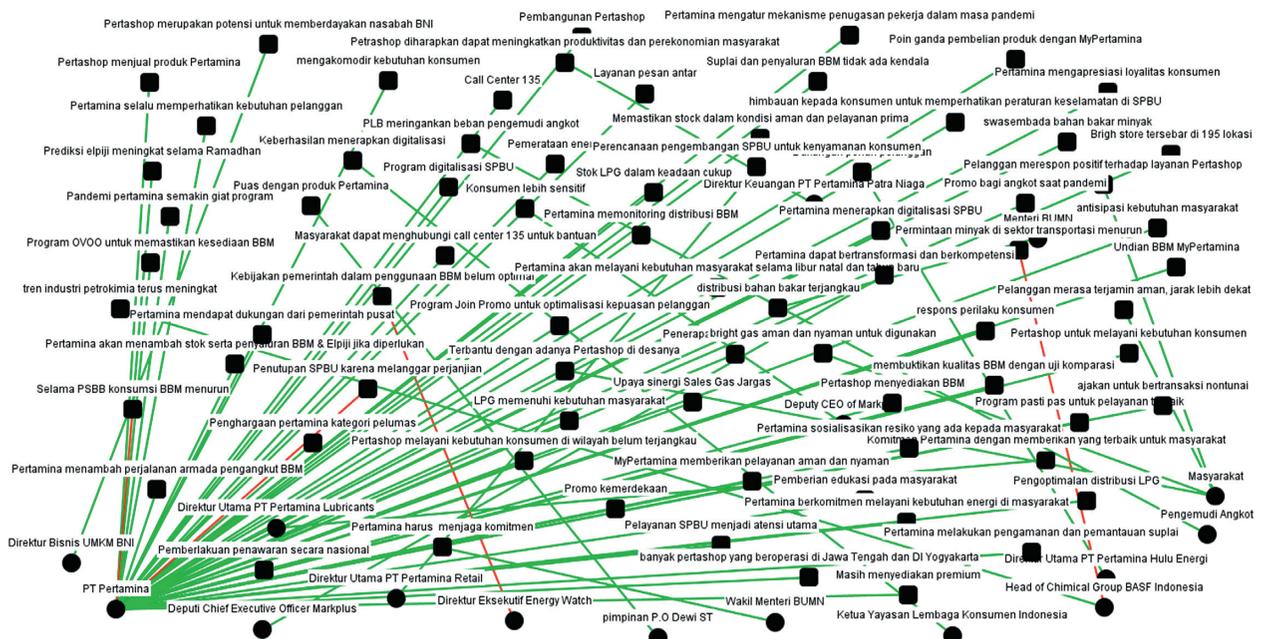


FIGURE 2: Actors and issues of PT Pertamina.

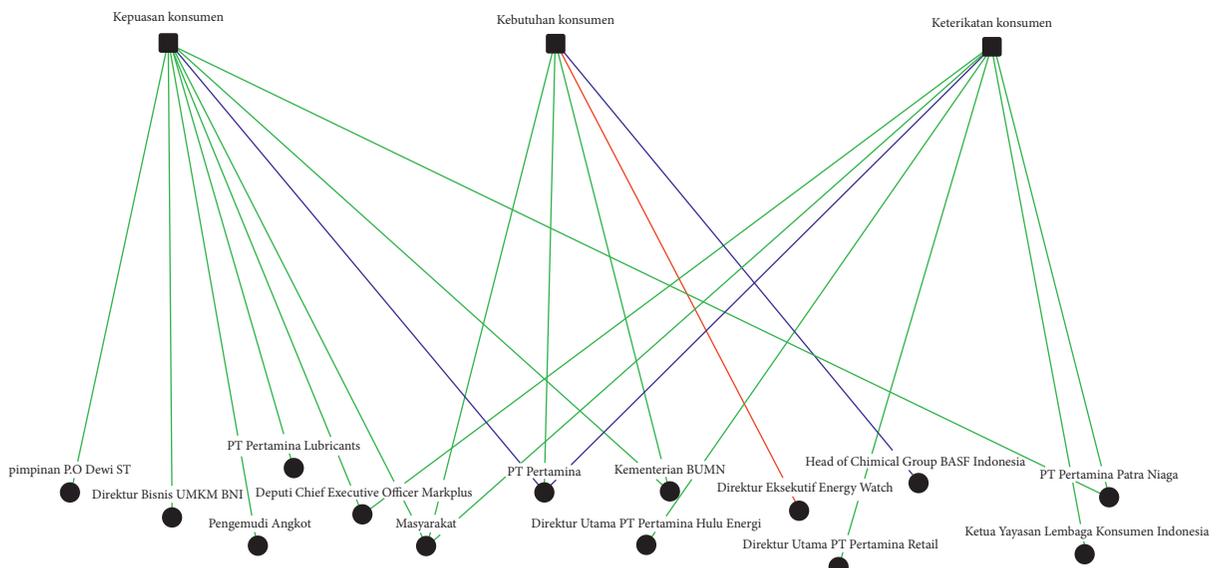


FIGURE 3: Mapping of PT Pertamina's actors and issues.

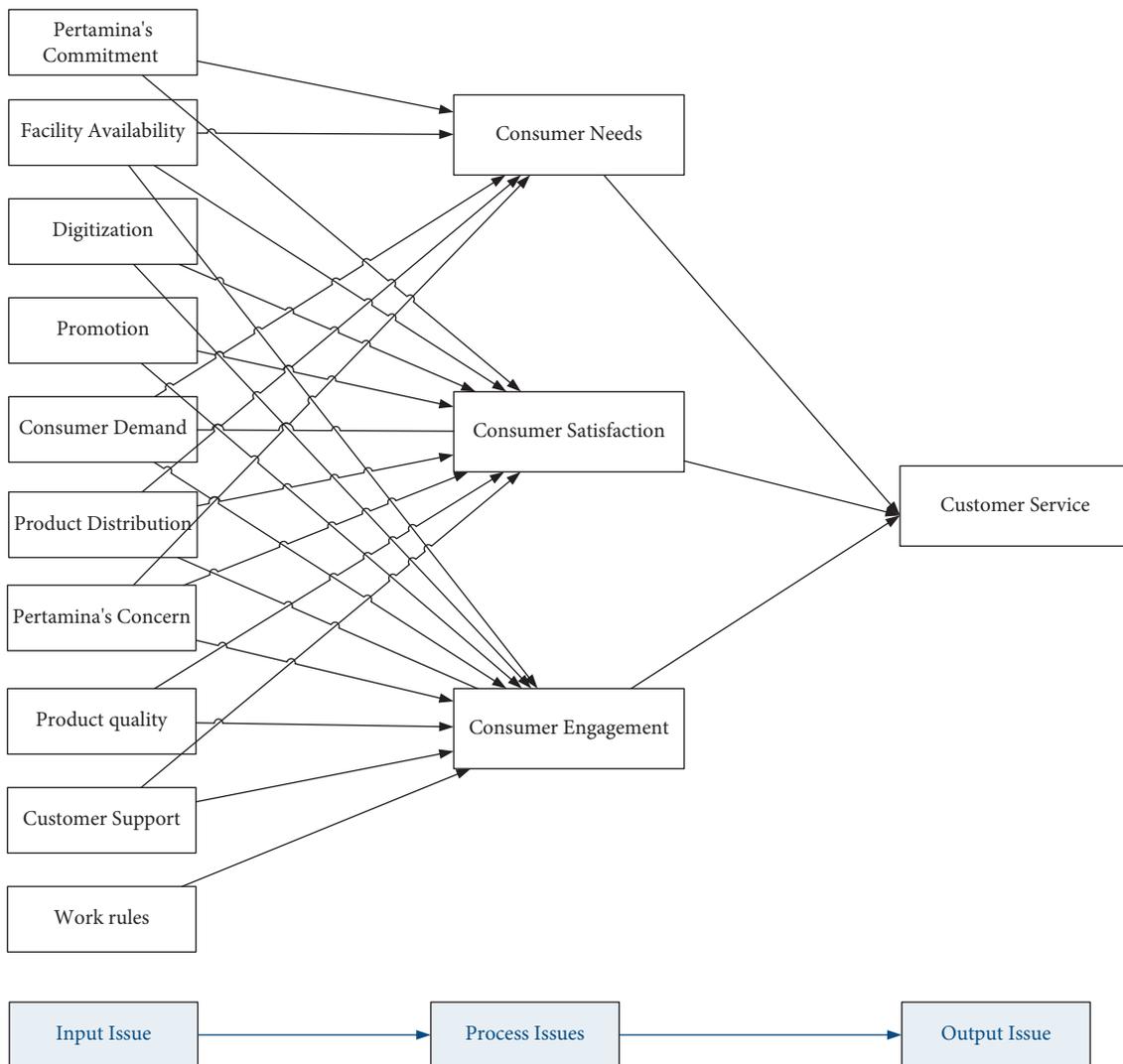


FIGURE 4: PT Pertamina's consumer service segmentation model.

- (9) Promotion can meet consumer engagement
- (10) Consumer demand affects consumer needs
- (11) Consumer demand affects customer satisfaction
- (12) Consumer demand affects consumer engagement
- (13) Product distribution can meet consumer needs
- (14) Product distribution can meet consumer satisfaction
- (15) Product distribution can meet consumer engagement
- (16) Pertamina's concern for the community can meet consumer needs
- (17) Pertamina's concern for the community can meet consumer satisfaction
- (18) Pertamina's concern for the community can fulfill consumer engagement
- (19) Product quality can meet consumer satisfaction
- (20) Product quality can meet consumer engagement
- (21) Customer support can meet customer satisfaction
- (22) Customer support affects consumer engagement
- (23) The work rules made by PT Pertamina affect consumer engagement

Of the 23 proportions above that affect three main issues, it can determine the segmentation of consumer services that use fuel from PT Pertamina. Based on these minor propositions, issues can be divided into three parts (groups). First, the input issue consists of issues related to the opinions of actors who discuss the segmentation of consumers who are PT Pertamina's BBM users. Second, the process issue consists of issues related to consumer satisfaction, consumer needs, and consumer engagement. Third, the output issue which includes the issue of consumer service referred to in this study is the service of PT Pertamina in selling fuel to customers. The interrelationships between the sections (groups) of these issues can be used to construct major propositions. Thus, the major proposition can be formulated as follows:

TABLE 1: Mapping of actors, issues, and sentiments about PT Pertamina's consumer service segmentation.

No	Organization	Actor Position	Name	Issue/Concept	Main issue	Sentiment
1	PO Dewi ST	Head of PO Dewi ST	Warsidi	Satisfied with Pertamina products	Consumer satisfaction	Positive
2	Ministry of SOEs	Minister of SOEs	Erick Thohir	Affordable fuel distribution	Consumer needs	Positive
3	PT Pertamina Hulu Energi	President director of PT Pertamina Hulu Energi	Meidawati	Full customer support	Consumer engagement	Positive
4	BNI SME	BNI MSME business director	Muhammad Iqbal	Pertashop is the potential to empower BNI customers	Consumer satisfaction	Positive
5	PT Pertamina	Unit manager communication, relations, and corporate social responsibility (CSR) Pertamina central java regional marketing	Brasto Galih Nugroho	Operational units and distribution agencies in central java are running optimally	Consumer needs	Positive
6	PT Pertamina Patra Niaga	Corporate secretary PT Pertamina Patra Niaga subholding commercial and trading (SH C&T)	Putut Andriatno	Double points for purchasing products with MyPertamina	Consumer satisfaction	Positive
7	PT Pertamina Lubricants	Director of operations of PT Pertamina Lubricants	Andria Nusa	Pertamina gets an award in the lubricant category	Consumer satisfaction	Positive
8	Public	BBM consumers (Pertashop customers)	Mulyadi	Customers respond positively to Pertashop's services	Consumer needs	Positive
9	BASF Indonesia	Head of chemical group BASF Indonesia	Fahrurrozi	The trend of the petrochemical industry continues to increase	Consumer needs	Positive
10	Indonesian consumers foundation	Chairman	Sincere Eternal	Oil demand in the transportation sector is declining	Consumer needs	Negative
11	Markplus	Deputy chief executive officer (deputy CEO)	Jacky Mussry	Consumers are more sensitive	Consumer engagement	Positive
12	Energy Watch	Executive director	Mamit Setiawan	Government policies in the use of fuel are not optimal	Consumer needs	Negative
13	Angkot driver	Angkot driver	Anton	The blue-sky program (PLB) eases the burden on Angkot drivers	Consumer satisfaction	Positive
14	PT Pertamina retail	President director	Sofyan Yusuf	Gas station development planning for consumer convenience	Consumer engagement	Positive

TABLE 2: Analysis of the concept of issues.

No.	Issue/Concept	Main issue	Issue concept	Sentiment
1	LPG meets people's needs		Product	Positive
2	Affordable fuel distribution		distribution	Positive
3	Fuel subsidies must be right on target to consumers who need them and also customer data is needed to anticipate community needs		Pertamina's concern	Positive
4	PT Pertamina's response to changes in business and consumer behavior			Positive
5	Hope that call center 135 services can accommodate the needs of Indonesian consumers	Consumer needs	Availability of facilities	Positive
6	The existence of Pertashops in rural areas and Islamic boarding schools to distribute energy and provide quality and environmentally friendly energy			Positive
7	Pertamina always pays attention to market and customer needs, and Pertamina catches changes in market trends and consumer behavior		Pertamina's commitment	Positive
8	The trend of the petrochemical industry continues to increase		Consumer demand	Positive
9	Oil demand in the transportation sector is declining			Negative

TABLE 2: Continued.

No.	Issue/Concept	Main issue	Issue concept	Sentiment
10	Application of the gas station digitization method		Digitization	Positive
11	During the pandemic, Pertamina is increasingly active in maximizing programs that directly touch consumers with various conveniences in getting products		Product distribution	Positive
12	Pertamina is still distributing and providing premium		Customer support	Positive
13	Pertamina gets an award in the lubricant category		Pertamina's concern	Positive
14	Providing education to the public about fuel selection		Product quality	Positive
15	Fit program for the best service	Consumer satisfaction	Availability of facilities	Positive
16	Satisfied with Pertamina products		Pertamina's commitment	Positive
17	The blue-sky program (PLB) eases the burden on Angkot drivers		Consumer demand	Negative
18	Pertamina must maintain its commitment		Promotion	Positive
19	Fuel consumption has decreased		Digitization	Positive
20	Promo for Angkot drivers during a pandemic		Product distribution	Positive
21	Pertamina tries to continue to implement the digitization of gas stations		Customer support	Positive
22	Pertamina carries out security and monitoring of the supply, distribution, and sale of BBM and LPG		Pertamina's concern	Positive
23	Full customer support	Consumer engagement	Availability of facilities	Positive
24	Appeal to consumers to pay attention to safety regulations at gas stations		Product quality	Positive
25	Gas station development planning for consumer convenience		Work rules	Positive
26	Pertamina proves the quality of fuel with a comparison test		Consumer demand	Positive
27	The closure of gas stations for violating the agreement			Negative
28	Pertamina regulates the mechanism for assigning workers during the pandemic			Positive
29	LPG predictions increase during Ramadan			Positive
30	Invitation to consumers to increase MyPertamina BBM coupon redemption because there will be a prize draw soon		Promotion	Positive

TABLE 3: Stakeholders and actor theme.

No	Stakeholders	Actor theme	Sentiment
1	Unit manager communication, relations, and corporate social responsibility (CSR)		Positive
2	Pertamina central java regional marketing		Positive
3	Director of retail orders PT Pertamina (Persero)		Positive
4	SVP corporate communication and investor relations of PT Pertamina		Positive/Negative
5	Vice president of corporate communications of PT Pertamina		Positive
6	Unit manager communication and CSR PT Pertamina MOR VII		Positive
7	President director of Pertamina retail	PT Pertamina	Positive
8	Director of Pertamina's processing and petrochemical megaprojects		Positive
9	Unit manager communication, relations, and CSR MOR II		Positive
10	President director of Pertamina		Positive
11	Pertamina communication and CSR unit manager for marketing operation region IV		Positive
12	Unit manager communication and CSR MOR III		Positive
13	Executive general manager Pertamina regional central java		Positive
14	Unit manager communication, relations, and CSR MOR V		Positive
15	Unit manager communication relations and CSR MOR III		Positive
16	President director of PT Pertamina Hulu Energi	PT Pertamina Hulu Energi	Positive
17	Director of operations of PT Pertamina Lubricants	PT Pertamina Lubricants	Positive
18	President director of PT Pertamina Lubricants		Positive
19	Corporate secretary PT Pertamina Patra Niaga subholding commercial and trading (SH C&T)	PT Pertamina Patra Niaga	Positive
20	Finance director PT Pertamina Patra Niaga subholding commercial and trading PT Pertamina (Persero)		Positive

TABLE 3: Continued.

No	Stakeholders	Actor theme	Sentiment
20	Minister of SOEs	Ministry of SOEs	Positive
21	Deputy minister of SOEs		Positive
22	BNI MSME business director	MSME	Positive
23	Head of PO Dewi ST	Entrepreneur	Positive
24	Chairman of the Indonesian consumers foundation	Consumer agency	Negative
25	Head of chemical group BASF Indonesia	Indonesian chemical company	Positive/ Negative
26	Deputy chief executive officer (deputy CEO) Markplus	Consulting company	Positive
27	Energy watch executive director		Negative
28	BBM consumers (Pertashop customers)		Positive
29	Bright gas consumer	Public	Positive
30	Angkot driver		Positive

- (1) Input issues affect process issues
- (2) Process issues affect output issues
- (3) Output issues affect the successful implementation of customer service by PT Pertamina

Theory or model can be presented through one or a combination of the following 3 forms:

- (a) Verbal formulation: in this form, it means that the theory or model is presented in a series of descriptions which are theoretical statements
- (b) Mathematical formula
- (c) Curves, graphs, or displays

By referring to this perspective, from the minor and major propositions that have been mentioned, the sub-models in conducting consumer service analysis on BBM products sold by PT Pertamina based on the concept of issues can be arranged as Table 2. The research model generated from DNA can be seen in Figure 2. Based on Figure 2, it can be seen that there are several variables that have a possible influence on customer service. Variables that are likely to affect customer service include consumer needs, consumer satisfaction, and consumer engagement. Consumer needs that can be influenced by several variables include Pertamina's commitment, facility availability, consumer demand, product distribution, and Pertamina's concern. Consumer satisfaction can be influenced by nine variables, namely, Pertamina's commitment, facility availability, digitization, promotion, consumer demand, product distribution, Pertamina's concern, product quality, and customer support. Meanwhile, the consumer engagement variable can be influenced by nine variables, including facility availability, digitization, promotion, consumer demand, product distribution, Pertamina's concern, product quality, customer support, and work rules.

## 5. Conclusions and Suggestions

Application of Discourse Network Analysis (DNA) is in the formation of networks related to issues and actors in a news regarding consumer needs, satisfaction, and attachment to PT Pertamina using Discourse Network Analyzer software and visualization using Visone software, namely, by taking

statements from various parties discussing consumers PT Pertamina which is taken from 68 news in cyberspace. From the news obtained the average community is satisfied with the facilities that have been provided by Pertamina plus the promos provided, and PT Pertamina always supervises the distribution of products so that the needs, satisfaction, and attachment of consumers are increasingly fulfilled.

DNA results taken from 68 news in cyberspace show that there are 45 actors from 14 different organizations who argue about PT Pertamina consumers. Two actors only have a negative opinion, two actors have positive and negative opinions, and 41 actors have a positive opinion about the main issue of consumer needs. The 74 issues from the news obtained are grouped into 3 main issues, namely, consumer needs, consumer satisfaction, and consumer engagement. And from 45 actors obtained from online news sources, they are grouped into 11 actor themes.

Of the 3 main issues, namely, consumer needs, consumer satisfaction, and consumer attachment, we obtained 10 concept issues that are used to compile the proportion of minor and major. Based on the minor and major proportions, it is found that input issues which consist of issues related to the opinions of actors who discuss the segmentation of consumers who become users of PT Pertamina BBM affect the process issue which consists of issues related to consumer satisfaction, consumer needs, and consumer engagement. Process issues affect PT Pertamina's services in selling fuel to customers. And the service of PT Pertamina in selling fuel to customers affects the success of the implementation of consumer services carried out by PT Pertamina.

The advice that can be given based on the results of this research is for PT Pertamina to be aware of the existence of parties who have negative opinions regarding the needs, satisfaction, and attachment of consumers to PT Pertamina. From this negative opinion, PT Pertamina can improve service performance and proximity to consumers to obtain maximum customer satisfaction and can also improve product quality according to consumer needs. PT Pertamina is expected to maintain the quality of service to consumers so that the needs, satisfaction, and attachment of consumers can be fulfilled so that consumers feel satisfied. Further research can increase the number of news that will be analyzed regarding PT Pertamina consumers so that the scope

is wider to see the sentiments given by various actors who have opinions.

### Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

### Ethical Approval

This article does not contain any studies with human participants performed by any of the authors.

### Disclosure

The first and second researchers are lecturers at the Department of Statistics, Faculty of Mathematics and Natural Sciences, Universitas Brawijaya. Researchers have several papers that have been published in Scopus indexed journals.

### Conflicts of Interest

The authors declare that they have no conflicts of interest.

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